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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,375	08/15/2001	Indermohan S. Monga	14986BAUS01U	9204

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EXAMINER	
PATEL, ASHOKKUMAR B	

ART UNIT	PAPER NUMBER
2154	

DATE MAILED: 01/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/930,375	MONGA ET AL.	
	Examiner	Art Unit	
	Ashok B. Patel	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 August 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 8/15/01, 3/4/02, 4/17/03
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Application Number 09/930, 375 was filed on 08/15/2000. Claims 1-38 are subject to examination.

Specification

2. The disclosure is objected to because of the following informalities: Related arts are lacking their corresponding serial numbers. See page1 and page 2. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4 Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Busuioc et al. (hereinafter Busuioc) (US 2001/0033551 A1) in view of Levandovsky et al. (hereinafter Levandovsky) (US 2002/0063915 A1)

Referring to claim 1 and 2,

The reference Busuioc teaches "An embodiment of the present invention can be described as an open heterogeneous system architecture based on autonomous software agents working cooperatively to solve a sub-set of service management problems in a GMSN. The service management problems concerned might include the above mentioned real-time reconfiguration together with service provision in response to customer request."(page 2, para. [0059]). The reference also teaches SLAs (page 1,

para. [0016] through [0034]) and "Conveniently, there may be one software agent, a SMA 5, situated at each of the GMSN nodes 3, each SMA 5 monitoring its underlying switch 3 as well as the links 2 extended to the switch 3. Primarily, each SMA 5 controls just one switch 3 but any given SMA 5 has the ability to control a number of switches 3 simultaneously. That is, a SMA 5 is able to specify which incoming and outgoing communication links 2 a service will use.",(page 3, para.[0075]). The reference also teaches "The software agents 5, 6 are of two types, these being Service Management Agents (SMAs) 5, and Customer Agents (CAs) 6. Each. CA 6 is associated with a SMA 5 and acts to negotiate between a GMSN customer and a SMA 5 that might provide a service to that customer.(page 3, para.[0068]), and Fig. 1, element 6. Thereby the reference teaches "An service agent for managing a service level agreement (SLA) for a user in communication system, the service agent comprising: a user-to-network interface (UNI) for interfacing with a communication network; a peer-to-peer interface for interfacing with peer users (Fig. 1, elements 6 with CAs) ; and service logic for interacting with the communication network via the UNI and with the peer users via the peer-to-peer interface for managing said SLA for the user (CAs and SMAs).

Although the reference teaches MSN being any network that is capable of supporting a range of services (page 1, para.[0014]), the reference fails to teach explicitly teach optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI.

The reference Levandovsky teaches optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI. (Fig. 1, elements 110, 120, and 156, page 1, para.[0014]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement Busuioc's service agents, for solving the problem that is being faced in optics industry, as indicated by Levandovsky, the network is faced with the problem of delivering an acceptable level of performance for the connection, by configuring the Levandovsky's ASON with the readily available Busuioc's service agents.

Referring to claim 3,

The reference Busuioc teaches these elements on page, 2, para. [0053], page 3, para. [0079] through [0085] by stating "[0053] When a network element fails, a number of services could be affected. They could fail completely or they could fail partially but their quality of service may drop below that defined in the customer SLA. When such faults occur, alternative ways (through network reconfiguration) must he found for re-establishing the same service.", and "[0059] An embodiment of the present invention can be described as an open heterogeneous system architecture based on autonomous software agents working cooperatively to solve a sub-set of service management problems in a GMSN. The service management problems concerned might include the above mentioned real-time reconfiguration together with service provision in response to customer request.", and "Acting in a dynamically changing environment, a SMA 5

may evolve through various states 30. A state 30 is defined as an instance of agents knowledge, created as a result of the agent's interaction with the physical environment and/or contact with other agents. The SMA's knowledge may be partitioned into two categories, the agents database 31 and the agent's working memory 32. The agent's database 31 carries descriptions of neighboring agent's topology 33, local network topology 34 that the relevant agent 5 is responsible for and a traffic profile 35." Para. [0079], "a distributed routing algorithm." para. [0082]. Thereby the reference teaches the service logic is operably coupled to monitor and analyze a connection in real-time for determining SLA compliance.

Although the reference teaches MSN being any network that is capable of supporting a range of services (page 1, para.[0014]), the reference fails to teach explicitly teach service logic being an optical.

The reference Levandovsky teaches optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI. (Fig. 1, elements 110, 120, and 156, page 1, para .[0014]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement Busuioc's service agents, for solving the problem that is being faced in optics industry, as indicated by Levandovsky, the network is faced with the problem of delivering an acceptable level of performance for the connection, by configuring the Levandovsky's ASON with the readily available Busuioc's service agents.

Referring to claims 4 and 5,

The reference Busuioc teaches on page 3, para. [0079] through [0085] by stating "The agent's database 31 is constantly updated during an agent's existence and is enhanced through contact with neighboring SMAs 5 during problem solving sessions. Based on the messages it receives, such as alarms, partial route results, confirmation and reservation of circuits along a route in order to install a service, etc, each SMA 5 builds its own model 39 of the GMSN 1 and the services running on. para. [0085]. Thereby the reference teaches wherein the service logic is operably coupled to gather and maintain statistical information relating to a connection and wherein the service logic is operably coupled to analyze the statistical information off-line for determining SLA compliance, patterns, and trends.

Although the reference teaches MSN being any network that is capable of supporting a range of services (page 1, para.[0014]), the reference fails to teach explicitly teach service logic being an optical.

The reference Levandovsky teaches optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI. (Fig. 1, elements 110, 120, and 156, page 1, para .[0014]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement Busuioc's service agents, for solving the problem that is being faced in optics industry, as indicated by Levandovsky, the network is faced with the problem of delivering an acceptable level of performance for the connection, by configuring the Levandovsky's ASON with the readily available Busuioc's service agents.

Referring to claims 6 and 7,

The reference teaches the claimed elements on page 2, para. [0038] through [0050]. The reference states "[0038] Providing Multi-Service capabilities across more than one country is likely to require considerable capital outlay. To make such a network viable the operating cost has to be kept within tight constraints. To meet this operating cost constraint, extensive automation of management functions in the network will be very attractive, if not essential. [0039] According to embodiments of the present invention, this automation will be achieved at least in part through the use of Cooperating Intelligent Software Agent technology.", and as "[0046] Service provisioning is a requirement of any telecommunications operator. Service provisioning for a GMSN tends to differ from conventional networks because of the following characteristics: [0047] A large range of services, [0048] A wide range of customer types, [0049] Complex SLAs with financial penalties, [0050] Network(s) spanning more than one country". Thereby the reference teaches the agent's service logic does include the ability to interact with a service provider to enforce penalty provisions in the SLA, and wherein the service logic is operably coupled to interact with a service provider to negotiate a credit for services not provided by the service provider in accordance with the SLA.

Although the reference teaches MSN being any network that is capable of supporting a range of services (page 1, para.[0014]), the reference fails to teach explicitly teach service logic being an optical.

The reference Levandovsky teaches optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI. (Fig. 1, elements 110, 120, and 156, page 1, para .[0014]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement Busuioc's service agents, for solving the problem that is being faced in optics industry, as indicated by Levandovsky, the network is faced with the problem of delivering an acceptable level of performance for the connection, by configuring the Levandovsky's ASON with the readily available Busuioc's service agents.

Referring to claims 8 and 9,

The reference Busuioc's teaches the SLAs in an elaborative manner on page 1 and 2, para. [0016] through [0034]. It includes the components such as "Target and guaranteed service availability" fault handling" and "The exact definition of the service is specified in a Service Level Agreement (SLA). The range of services available is potentially extremely large, and each service can be further customize since each service has a range of options." The reference also teaches long term service provisioning including complex SLAs with financial penalties para. [0049], page 2.

Although the reference teaches MSN being any network that is capable of supporting a range of services (page 1, para.[0014]), the reference fails to teach explicitly teach service logic being an optical.

The reference Levandovsky teaches optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI. (Fig. 1, elements 110, 120, and 156, page 1, para .[0014])

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement Busuioc's service agents for solving the problem such as "Target and guaranteed service availability" and "fault handling" in accordance with the SLA content (to negotiate "replacement" services for a breach of the SLA, and wherein the service logic is operably coupled to interact with various network elements to rectify a breach of the SLA) and for solving the problem that is being faced in optics industry, as indicated by Levandovsky, the network is faced with the problem of delivering an acceptable level of performance for the connection, by configuring the Levandovsky's ASON with the readily available Busuioc's service agents.

Referring to claim 10,

The reference Busuioc teaches these elements by stating "Notably the service parameters Cost, Priority and Bandwidth are reconsidered and may be altered during the negotiation between a SMA 5 and a CA 6, prior to service acceptance and installment." on page 4, para. [0097]. The reference also teaches "the SMAs 5 responsible for the links of the route that carry the services to be disrupted identify those services automatically and try to find alternative routes (route restoration) for them, if possible. If not, the SMA may renegotiate with the CA responsible for the disrupted services. This is to minimize the loss of revenue caused by the disruption of the lower

priority services." page 5, para. [0129]. (the service logic is operably coupled to interact with the service provider to dynamically modify the SLA based upon changing user requirements.)

Although the reference teaches MSN being any network that is capable of supporting a range of services (page 1, para.[0014]), the reference fails to teach explicitly teach service logic being an optical.

The reference Levandovsky teaches optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI. (Fig. 1, elements 110, 120, and 156, page 1, para .[0014]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement Busuioc's service agents, for solving the problem that is being faced in optics industry, as indicated by Levandovsky, the network is faced with the problem of delivering an acceptable level of performance for the connection, by configuring the Levandovsky's ASON with the readily available Busuioc's service agents.

Referring to claim 11,

The reference Busuioc teaches "Information about billing, fault handling and performance criteria may also be held within a feature, so long as it is common to all instances of that feature.", page 1, para. [0033]. Thereby the reference teaches service logic is operably coupled to interface with a billing /accounting system to provide SLA-related information.

Although the reference teaches MSN being any network that is capable of supporting a range of services (page 1, para.[0014]), the reference fails to teach explicitly teach service logic being an optical.

The reference Levandovsky teaches optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI. (Fig. 1, elements 110, 120, and 156, page 1, para .[0014]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement Busuioc's service agents, for solving the problem that is being faced in optics industry, as indicated by Levandovsky, the network is faced with the problem of delivering an acceptable level of performance for the connection, by configuring the Levandovsky's ASON with the readily available Busuioc's service agents.

Referring to claim 12,

The reference also teaches SLAs (page 1, para. [0016] through [0034]) and "Conveniently, there may be one software agent, a SMA 5, situated at each of the GMSN nodes 3, each SMA 5 monitoring its underlying switch 3 as well as the links 2 extended to the switch 3. Primarily, each SMA 5 controls just one switch 3 cut any given SMA 5 has the ability to control a number of switches 3 simultaneously. That is, a SMA 5 is able to specify which incoming and outgoing communication links 2 a service will use." The reference also teaches "The software agents 5, 6 are of two types, these being Service Management Agents (SMAs) 5, and Customer Agents (CAs) 6. Each. CA 6 is associated with a SMA 5 and acts to negotiate between a GMSN customer and

a SMA 5 that might provide a service to that customer.(page 3, para.[0068]) and Fig. 1, elements 6. Thereby the reference teaches "An service agent (CAs) for managing a service level agreement (SLA) for the user application, and a user application requiring communication services from communication network (Fig. 1, elements 6).."

Although the reference teaches MSN being any network that is capable of supporting a range of services (page 1, para.[0014]), the reference fails to teach explicitly teach service logic being an optical.

The reference Levandovsky teaches optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI. (Fig. 1, elements 110, 120, and 156, page 1, para .[0014]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement Busuioc's service agents, for solving the problem that is being faced in optics industry, as indicated by Levandovsky, the network is faced with the problem of delivering an acceptable level of performance for the connection, by configuring the Levandovsky's ASON with the readily available Busuioc's service agents.

Referring to claims 13 and 14,

Claims 13 and 14 are claims to a device that incorporates the functionality of the optical service agent of claims 1 and 2. Therefore, claims 13 and 14 are rejected for the reasons set forth for claims 13 and 14.

Referring to claim 15,

Claim 15 is a claim to a device that incorporates the functionality of the optical service agent of claim 3 Therefore, claim 15 is rejected for the reasons set forth for claim 15.

Referring to claims 16 and 17,

Claims 16 and 17 are claims to a device that incorporates the functionality of the optical service agent of claims 4 and 5. Therefore, claims 16 and 17 are rejected for the reasons set forth for claims 4 and 5.

Referring to claims 18 and 19,

Claims 18 and 19 are claims to a device that incorporates the functionality of the optical service agent of claims 6 and 7. Therefore, claims 18 and 19 are rejected for the reasons set forth for claims 6 and 7.

Referring to claims 20 and 21,

Claims 20 and 21 are claims to a device that incorporates the functionality of the optical service agent of claims 8 and 9. Therefore, claims 20 and 21 are rejected for the reasons set forth for claims 8 and 9.

Referring to claim 22,

Claim 22 is a claim to a device that incorporates the functionality of the optical service agent of claim 10. Therefore, claim 22 is rejected for the reasons set forth for claim 10.

Referring to claim 23,

Claim 23 is a claim to a device that incorporates the functionality of the optical service agent of claim 11 Therefore, claim 23 is rejected for the reasons set forth for claim 11.

Referring to claims 24 and 25

Claims 24 and 25 are claims to a system that incorporates the functionality of the optical service agent of claims 1 and 2. Therefore, claims 24 and 25 are rejected for the reasons set forth for claims 13 and 14.

Referring to claim 26,

Claim 26 is a claim to a system that incorporates the functionality of the optical service agent of claim 3. Therefore, claim 26 is rejected for the reasons set forth for claim 15.

Referring to claims 27 and 28,

Claims 27 and 28 are claims to a system that incorporates the functionality of the optical service agent of claims 4 and 5. Therefore, claims 27 and 28 are rejected for the reasons set forth for claims 4 and 5.

Referring to claims 29 and 30,

Claims 29 and 30 are claims to a system that incorporates the functionality of the optical service agent of claims 6 and 7. Therefore, claims 18 and 19 are rejected for the reasons set forth for claims 6 and 7.

Referring to claims 31 and 32,

Claims 31 and 32 are claims to a system that incorporates the functionality of the optical service agent of claims 8 and 9. Therefore, claims 31 and 32 are rejected for the reasons set forth for claims 8 and 9.

Referring to claim 33,

Claim 33 is a claim to a system that incorporates the functionality of the optical service agent of claim 10. Therefore, claim 33 is rejected for the reasons set forth for claim 10.

Referring to claim 34,

Claim 34 is a claim to a system that incorporates the functionality of the optical service agent of claim 11. Therefore, claim 34 is rejected for the reasons set forth for claim 11.

Referring to claim 35,

The reference Busuioc teaches "An embodiment of the present invention can be described as an open heterogeneous system architecture based on autonomous software agents working cooperatively to solve a sub-set of service management problems in a GMSN. The service management problems concerned might include the above mentioned real-time reconfiguration together with service provision in response to customer request."(page 2, para. [0059]). The reference also teaches SLAs (page 1, para. [0016] through [0034]) and "Conveniently, there may be one software agent, a SMA 5, situated at each of the GMSN nodes 3, each SMA 5 monitoring its underlying switch 3 as well as the links 2 extended to the switch 3. Primarily, each SMA 5 controls just one switch 3 cut any given SMA 5 has the ability to control a number of switches 3 simultaneously. That is, a SMA 5 is able to specify which incoming and outgoing communication links 2 a service will use."

The reference Busuioc teaches on page, 2, para. [0053], page 3, para. [0079] through [0085] by stating "[0053] When a network element fails, a number of services could be affected. They could fail completely or they could fail partially but their quality of service may drop below that defined in the customer SLA. When such faults occur, alternative ways (through network reconfiguration) must he found for re-establishing the same service.", and "[0059] An embodiment of the present invention can be described as an open heterogeneous system architecture based on autonomous software agents

working cooperatively to solve a sub-set of service management problems in a GMSN. The service management problems concerned might include the above mentioned real-time reconfiguration together with service provision in response to customer request.", and "Acting in a dynamically changing environment, a SMA 5 may evolve through various states 30. A state 30 is defined as an instance of agents knowledge, created as a result of the agent's interaction with the physical environment and/or contact with other agents. The SMA's knowledge may be partitioned into two categories, the agents database 31 and the agent's working memory 32. The agent's database 31 carries descriptions of neighboring agent's topology 33, local network topology 34 that the relevant agent 5 is responsible for and a traffic profile 35." Para. [0079], "a distributed routing algorithm." para. [0082]. Thereby the reference teaches the method of monitoring and analyzing a connection in real-time for determining SLA compliance.

The reference Busuioc teaches on page 3, para. [0079] through [0085] by stating "The agent's database 31 is constantly updated during an agent's existence and is enhanced through contact with neighboring SMAs 5 during problem solving sessions. Based on the messages it receives, such as alarms, partial route results, confirmation and reservation of circuits along a route in order to install a service, etc, each SMA 5 builds its own model 39 of the GMSN 1 and the services running on. para. [0085]. Thereby the reference teaches the method of gathering and maintaining statistical information relating to a connection, and analyzing the statistical information off-line for determining SLA compliance, patterns, and trends.

The reference teaches the claimed elements on page 2, para. [0038] through [0050]. The reference states "[0038] Providing Multi-Service capabilities across more than one country is likely to require considerable capital outlay. To make such a network viable the operating cost has to be kept within tight constraints. To meet this operating cost constraint, extensive automation of management functions in the network will be very attractive, if not essential. [0039] According to embodiments of the present invention, this automation will be achieved at least in part through the use of Cooperating Intelligent Software Agent technology.", and as "[0046] Service provisioning is a requirement of any telecommunications operator. Service provisioning for a GMSN tends to differ from conventional networks because of the following characteristics: [0047] A large range of services, [0048] A wide range of customer types, [0049] Complex SLAs with financial penalties, [0050] Network(s) spanning more than one country". Thereby the reference teaches the method of interacting with a service provider to enforce penalty provisions in the SLA, and to negotiate a credit for services not provided by the service provider in accordance with the SLA.

The reference Busuioc's teaches the SLAs in an elaborative manner on page 1 and 2, para. [0016] through [0034]. It includes the components such as "Target and guaranteed service availability" fault handling" and "The exact definition of the service is specified in a Service Level Agreement (SLA). The range of services available is potentially extremely large, and each service can be further customize since each service has a range of options." The reference also teaches long term service provisioning including complex SLAs with financial penalties para. [0049], page 2.

Thereby the reference teaches to negotiate "replacement" services for a breach of the SLA, and to rectify a breach of the SLA.

The reference Busuioc's teaches the SLAs in an elaborative manner on page 1 and 2, para. [0016] through [0034]. It includes the components such as "Target and guaranteed service availability" fault handling" and "The exact definition of the service is specified in a Service Level Agreement (SLA). The range of services available is potentially extremely large, and each service can be further customize since each service has a range of options." The reference also teaches long term service provisioning including complex SLAs with financial penalties para. [0049], page 2. The reference Busuioc teaches "Notably the service parameters Cost, Priority and Bandwidth are reconsidered and may be altered during the negotiation between a SMA 5 and a CA 6, prior to service acceptance and installment." on page 4, para. [0097]. The reference also teaches "the SMAs 5 responsible for the links of the route that carry the services to be disrupted identify those services automatically and try to find alternative routes (route restoration) for them, if possible. If not, the SMA may renegotiate with the CA responsible for the disrupted services. This is to minimize the loss of revenue caused by the disruption of the lower priority services." page 5, para. [0129]. (interacting with the service provider to dynamically modify the SLA based upon changing user requirements.)

The reference Busuioc teaches by stating "Information about billing, fault handling and performance criteria may also be held within a feature, so long as it is

common to all instances of that feature.", page 1, para. [0033]. (interfacing with a billing/accounting system to provide SLA-related information)

Although the reference teaches MSN being any network that is capable of supporting a range of services (page 1, para.[0014]), the reference fails to teach explicitly teach communication system being an optical. The reference Levandovsky teaches optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI. (Fig. 1, elements 110, 120, and 156, page 1, para .[0014]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement Busuioc's service agents, for solving the problem that is being faced in optics industry, as indicated by Levandovsky, the network is faced with the problem of delivering an acceptable level of performance for the connection, by configuring the Levandovsky's ASON with the readily available Busuioc's service agents.

Referring to claims 36, 37 and 38,

The reference Busuioc teaches monitoring the integrity of the connection to verify that the connection meets certain SLA criteria; monitoring traffic on the connection to verify that the connection meets certain SLA criteria; querying a core communication network in order to obtain information compiled by the core communication network for verifying that the connection meets certain SLA criteria; and querying peer users in order to obtain information compiled by the peer users for verifying that the connection meets certain SLA criteria. (page 3, para. [0079] through [0085]), and wherein

interacting with various network elements to rectify a breach of the SLA comprises at least one of: re-requesting the connection; and notifying a service provider of the SLA breach; and orchestrating various network changes to resolve or work around the SLA breach. (page 3, para. [0075], page 5, para. [0129], page 4, para. [0111], page 2, para. [0052-[0059]), and wherein interacting with the service provider to dynamically modify the SLA based upon changing user requirements comprises: determining changing requirements of the user; and dynamically renegotiating the SLA to meet the changing requirements of the user. (page 1 and 2, para. [0016] through [0034], page 5, para. [0129].

Although the reference teaches MSN being any network that is capable of supporting a range of services (page 1, para.[0014]), the reference fails to teach explicitly teach communication system being an optical. The reference Levandovsky teaches optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI. (Fig. 1, elements 110, 120, and 156, page 1, para .[0014]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement Busuioc's service agents, for solving the problem that is being faced in optics industry, as indicated by Levandovsky, the network is faced with the problem of delivering an acceptable level of performance for the connection, by configuring the Levandovsky's ASON with the readily available Busuioc's service agents.

Conclusion

Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (571) 272-3972. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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